

Yuba Basin Modeling Forum

Wednesday, May 19, 2004.

Welcome and Introductions:

On May 19, 2004, a meeting was held at the Bonderson Building in Sacramento to discuss the creation of a forum for sharing modeling and data collection efforts within the Yuba River Basin. John Clerici, Public Affairs Management, provided meeting facilitation and welcomed participants. He reviewed the desired outcomes of the meeting, which included:

- Establish meeting format and future discussion topics
- Provide group input into Forum Vision and Mission Statements
- Identify additional Forum participants.

After reviewing the agenda and providing meeting logistics, John explained that each Forum meeting would have a theme or thread that would lead to the next meeting's topic. He introduced Ted Frink of the California Department of Water Resources, who had identified the potential benefits of creating such a forum to share information that is being collected in the Yuba watershed. For this purpose, DWR established a contract with Entrix and Public Affairs Management to develop a Yuba Modeling Forum. The Forum (through Entrix and PAM) is being financially supported by DWR's Statewide Watershed Program for the next 12 months. John introduced Paul Wisheropp of Entrix and Sonja Wadman of Public Affairs Management, who would also serve as Forum staff. Ted Frink addressed the group and explained the concept behind developing a forum. The Forum is tasked with considering the entire Yuba Basin and how scientists understand the physical and biological processes that define the Yuba River Basin. He introduced Aric Lester (DWR) as the Forum Coordinator; Aric provided the group with his background and stated that he currently works in the Northern District of DWR in Red Bluff.

Yuba Modeling Forum:

Current and Additional Forum Participants

Meeting participants introduced themselves and gave a brief explanation of their work on the Yuba River and their reasons for attending the Yuba Modeling Forum.

Jeanne Brantigan: Works for CH2MHill with Robert Tull on the Upper Yuba River Studies Program (UYRSP). Developing models to incorporate climate and flow data, and correlate that to water temperature, on the Upper Yuba.

Paul Wisheropp: Works on the Daguerre Fish Passage Analysis, upstream spawning and sediment transport issues. Also is coordinating with the Army Corps of Engineers on a gravel augmentation project upstream of Daguerre.

Dave Thomas: Works for Robertson-Bryan, Inc. identifying fishery and restoration opportunities on the Lower Yuba. Has developed a conceptual model for the Lower Yuba and hopes to coordinate a web site highlighting restoration projects and opportunities.

Bill Mitchell: Consultant for Yuba County Water Agency. Conducts adult and juvenile Chinook salmon and steelhead monitoring on the lower Yuba River. Developing photographic/hydrographic maps of the river to evaluate the effectiveness of operational criteria to prevent fry stranding.

Mike Harvey: Works for Mussetter Engineering Inc. on the UYRSP focused on flood risk assessment in the event that Englebright Dam is recommended for removal. Conducting existing conditions hydraulic (HEC-RAS) and sediment transport modeling with an HEC-6T model based on COE 1998 topography and bathymetry and cross section information provided by the USGS for the reach upstream of Parks Bar Bridge. Have incorporated Wilcock-Crowe (2003) surface-based transport model algorithms for mixed-size sediment into the HEC-6T model to enable a single model to be developed from the Bear River confluence with the Feather River to Englebright Dam.

Hamish Moir: Works with Greg Pasternack at UC Davis identifying appropriate spawning habitat downstream of Englebright Dam. Collecting baseline data. Also doing some work at the Garcia Gravel Pits where there is currently heavy spawning activity; they are using a hydrologic model to determine the effects of sediment transport upon spawning.

Lorrie Flint: Works with USGS on the UYRSP developing a hydrology and sediment transport model. Has found that there is not much data available on the upper reaches of the Yuba watershed and hopes to learn from others in the Forum about the upper watershed. Recommended involving less "official" modelers and data gatherers, such as SYRCL monitors, to get more information.

Chris Bowles: Works for Phillip Williams Associates studying restoration opportunities for the Lower Yuba and a parkway concept for the Goldfields. Coordinates with SYRCL, the Bureau of Land Management, and the Yuba-Feather Workgroup. Also works on UYRSP, and on the Daguerre project. Use 2-dimensional models, demonstrational, not calibrated.

Paul Wisner commented that the purpose of the group is to serve as a general communication forum. It is meant to coordinate data collection and research efforts on the Yuba River, not just the models. Ted Frink agreed that a modeling effort could be informal, and the group discussed the merits of involving less formal modelers to the Forum. They were informed that members of SYRCL had been invited to the Forum but were unable to attend. The group discussed and identified the following groups or individuals that should be encouraged to attend the next Forum:

- A representative from SYRCL
- A representative from the Bureau of Land Management (Dean Swickard)
- A representative from CA Dept of Parks such as Lorna or Gene Patton from the Malacoff Diggings SHP
- Army Corps of Engineers
- Water agencies such as NID, Placer County
- Fraser Shilling with the Environmental Science and Policy Group at UC Davis
- A representative from the US Forest Service (Julie Tupper)
- Steve Granell from MWH
- Herb Greydanus from B-E
- Cesar Blanco from USFWS - AFRP
- Mike Tucker from NOAA

- John Nelson from DFG
- A representative from PG&E
- A representative from YCWA

Meeting Format & Schedule

John Clerici reminded the group that the intention of the Forum is to have meetings with presentations linked to a common theme that would lead to a related discussion at the next Forum meeting. The group would convene every other month with Forum participants meeting for at least one year.

John asked Forum participants to provide ideas for the next meetings. The group discussed the merits of having Upper versus Lower Yuba River meeting themes. It was suggested that we need to address watershed issues systematically, with an initial meeting on hydrology, followed by hydraulics, followed by sediment transport, followed by habitat and biology. Meeting participants commented that the end product of the Forum should be a conceptual systems model that attempts to describe how the entire ecosystem functions within the Basin. Ted reported that the CALFED Ecosystem Restoration Program will be very interested in the progress made by this Forum and ERP representatives such as Rebecca Fris will attend Forum meetings. The group agreed that all components of the ecosystem are linked together (hydrology, fish, habitat, and sediment) and all are equally important. Some members of the group expressed concern about tying together physical parameters and biological parameters into one model. The group agreed it is an issue of balance, and each should be maintained to have a healthy ecosystem. It was suggested that conceptual models would show where and how much information there is, and help identify data or knowledge gaps. The American River Watershed Group and a project on the Columbia River were offered as good examples of balanced conceptual models. At the next meeting, Dave Thomas offered to show his conceptual model of the Lower Yuba River and Lorrie Flint offered to make an informal presentation of their conceptual model for the Upper Yuba River watershed.

Draft Mission Statement

Aric Lester described the background for drafting the text for the Mission statement for the Forum. The group briefly discussed the differences between mission and purpose, and goals and objectives. It was identified that the Mission and Purpose of the Forum are living concepts that can be modified by the group as the need arises.

The Mission and Purpose Statements were combined to read:

“The Mission of the Yuba Basin Modeling Forum (YBMF) is to improve the understanding of ecosystem function in the Yuba River Basin through coordination and open communication. The YBMF will facilitate a forum to improve coordination, communication, and access to information relevant to modeling and data collection efforts in the Yuba River Watershed.”

Draft Goals and Associated Tasks (or Objectives)

The group reviewed the first goal statement and discussed the issue of providing public access to the models. The group agreed to the tasks associated with Goal 1, but re-wrote the goal to read:

“Goal 1. Provide easier professional access to modeling studies in the Yuba River Watershed.”

The group reviewed and approved the second goal statement. As Forum Coordinator, Aric Lester agreed to perform the tasks associated with Goal 2, with assistance from members of the Forum.

Wording for goal three was stricken because the ability for model “compatibility” was questioned. Exploring the idea of model “utility” was recommended. It was suggested to strike the second part of the task associated with Goal 3 (end after the word “applied”) and move that task to beneath a re-worded Goal 4. The concern with Goal 4 was over the words “consistent and compatible” where it was stated that every modeler cannot be expected to use the same assumptions, but that assumptions can be agreed to within the group. It was recommended to re-word these last two goals and their associated tasks for future review. Words in these goals or task statements should include:

“Increase group confidence in models”

“Explore the utility of existing models to address a broader scope of issues...”

“Document the limitations of models”

“Include or develop an internal peer review (or QA/QC evaluation) to determine assumptions.”

The group discussed developing a Metadata file that describes basic information being used in each model that someone in the Forum is using or developing. Participants were interested in seeing the use of 2-deminsional models in the Basin as well. This idea strengthens the notion that one of the goal of the Forum is to “coordinate and share information on all modeling and data research efforts being developed for the Yuba.”

ArcInfo System for Yuba River Presentation

Paul Wisheropp briefly explained that Entrix is creating a GIS database for the Army Corps of Engineers using historical aerial photographs. Their goal is to determine habitat conditions and distribution based on river movement over time. They have also examined cross-sections and pebble counts from USGS. Paul distributed handouts of the aerial photographs of the river upstream from Daguerre. He explained that the GIS database has various layers of information on it. The goal is to identify where fish have been successfully spawning in the past, and if those conditions can be duplicated elsewhere in the river. Paul stressed the utility of GIS ArcInfo, and encouraged its use. He stated that there are many historical pictures of the river, and suggested expanding the photo journal.

Lorrie commented that the Metadata that had been used for the GIS project would be very helpful for other projects and recommended standardizing the Metadata format for GIS data exchanged within the Forum. Developing a Metadata format was suggested as a discussion topic for the next Forum meeting.

Next Meeting and Discussion Items:

- Next Meeting Date and Time: July 21, 1-4 pm
- Location: 2800 Cottage Way, Sacramento, cafeteria conference room C-1002
- Presentations:
 - Lorrie Flint - Conceptual Model of Upper Yuba River Sediment Transport
 - Dave Thomas - Conceptual Model of Lower Yuba River (below Englebright)
 - Paul Wisheropp - GIS Metadata needs and format
 - Review of the formalized revised mission statement, goals and objectives (tasks)

The group decided that meetings would occur on the third Wednesday of every other month. After July 21, upcoming dates for the next six Forum meetings are:

- September 15
- November 17
- January 19
- March 16
- May 18
- July 20